



## **NWCG Smoke Committee January 2014 Activity Update**



### **Outreach and Messaging**

- October and November Activity Updates will be merged.
- Mike drafted info for executive board meeting highlighting AirNowTech & other activities.
- LessonsLearned website has smoke event information linked to it & all 2013 notes are on the private SmoC community section.

### **NWCG Business**

- Received a copy of the Review of the Interagency Wildland Fire Weather Station Standards & Guidelines.
  - Need to understand why there is a proposal to loosen requirements when instrumentation is better? Changed sensor accuracy to be less accurate. Should be as accurate as possible.
  - Standard role-back & comments on GSTOP.

### **SmoC would like to discuss New ICS 209 format at NWCG All-Chairs Meeting**

- SmoC not in loop when change was made—want to be included on future change discussions.
- Station standards – we need common dialogue.
- Fire cache eSamplers (shared with fire weather subcommittee).
- Mixing height methodology standard (fuels management, predictive services, fire weather subcommittee).

### **ICS 209 – New Format**

- Form is changing—New, more robust system with improved functionality to work within FEMA. Reporting capability tied to FAMWEB.
- Fields more logical for smoke/air situations (affecting personnel & public). Want to develop training to include smoke.
- Back-end data is in a totally different format—may affect fire location information in BlueSky. Also ties to WFDSS so opportunity to link information there exists.

### **Planned Webinar with EPA on AirNow Tech recently Version 2 Updates (SmoC, ARA, and support communities and FLM air programs) - Scheduled for January 16**

- NWCG is changing chairs next week.
- The Intl Assn. of Fire Chiefs will be in for next month's meeting (new group with NWCG).
- Deb Fleming is the Training Branch Coordinator for the new Training Committee and Leadership Subcommittee - Mike Elsworth, new chair of the new Training Committee.
- Week of the 21<sup>st</sup>, Pete, Mark, Elaine, Mike – in-person meeting on the upcoming RX410 revision and interest in working/communicating with SmoC.
- Signed Charter for the Data Management Committee (Rochelle and Cathy Hanson) – this group is going to crosswalk business needs with programs.
- NWCG will send out a memo next week on introducing the Data Management Committee. DMC would help carry SmoC business needs to the program board of the WFT group.
- SmoC would discuss large scale business needs (something like IFTDSS) – FS rep Richard Delrero.
- Allen Deetz (NWCG products) is being replaced by Cindy Wolf and they will be handing out a listing of what products committees are responsible for.
- Geospatial Operating Procedures Guide (GSTOP) is out for review and being finalized. The invasive species guide & resource advisor guides will be open for review in the next couple months.



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- Interagency Fire Implementation Guide was just published, Fuels Committee will begin working on Rx fire complexity analysis.
- DSTS is finalizing the last few glossary terms prior to NWCG review—target completion is mid-February. There will be 30 plus words coming out for NWCG group review.

### EPA Webinar AirNow Tech - Version 2 Updates – Natalie LaGuardia (first hour)

#### Part 1 – Reports Page

- Email reports at the bottom of the page – good for tracking data, you can search AirNow with Site, pollutant, time interval, it can be set up to email you a report daily.
- Data Page: added a clear button.
- Display: Has an abbreviated view that can fit on one page, and a more detailed display with agency, codes, and other metadata.
- Graphing: Users can scroll back and forth, zoom in, but not zoom out because the previous version was not displaying all data points when zoomed out to large time periods.
- Generate Air Quality Report Page: Different from data query page in that it is set up to view long term data (months and years of data) , which is good for comparing many data sets at one time (PM, ozone, etc in one report).
  - Reports help page with PDF report examples with set-up instructions, etc.
  - Working on backfilling AQS data 2010-2012 and importing update files since that period, so if you're looking at data from that period a lot of it is already available on here.
  - You can specify to view only AQS final data, or final and preliminary data. ---this is good because there is not yet a flag in the reports to show which data is prelim and which is final, so this feature is good to make sure your viewing final data.
- Showed an example run selecting all 24-hour pm2.5 and 8-hour begin time zone data for Louisiana aggregated by daily maximum for a 3-month period (below)

Table Output

Show  entries

CBSA	Good	Moderate	Unhealthy for Sensitive Groups	Unhealthy	Very Unhealthy	Hazardous
Lafayette, LA / Category	43	40	0	0	0	0
Houma-Bayou Cane-Thibodaux, LA / Category	82	1	0	0	0	0
N/A / Category	85	0	0	0	0	0
Shreveport-Bossier City, LA / Category	82	5	0	0	0	0
Monroe, LA / Category	60	25	0	0	0	0
NOT IN CBSA / Category	60	17	0	0	0	0
Lake Charles, LA / Category	74	13	0	0	0	0
New Orleans-Metairie-Kenner, LA / Category	74	13	0	0	0	0
Baton Rouge, LA / Category	60	27	0	0	0	0

Showing 1 to 17 of 17 entries.

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- Can also query by occurrence count for specific concentrations, and sort these by date.
- For you can also export data to csv or pdf file formats – lists out in plain English what the report includes and what datasets/monitoring stations are being included.
- Can also generate reports for top 10 AQI days for specified locations and time periods.

#### Part 2- Navigator page

- Parameters tab on PM – options to specify principal monitors, and also scales back data to one decimal point past the integer.



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- If you want to view data in 24-hour averages as opposed on one hour measurements or other averaging periods you can do that as well.
- Layers - Added a layers tab to show base layer (imagery, topo, light gray canvas and satellite layers (MODIS Tara and Aqua and GOES visible and IR – latter is only available for the most recent hour).
- Tools - Added Rose Tool: to create a wind rose or pollution rose.

### Questions Comments

- ARA applicability - Preliminary AirNow data are available through the latest hour – We also have the capability to get data from portable monitors.
  - Process to get a portable monitor in this system: AQCSV file format is needed. There is more information on this under the 'data formats and processing' help topic, people can also consult Natalie on more details for getting portable monitors to feed data into this AirNow site.
  - Some states that deploy their own portable monitors may add those sites to their normal feed, but in the future hopefully most of the portable data will be coming from the forest service (All our cache monitors have the data formatting capabilities needed).
  - Monitors that are not part of the cache may be set up to go if it has a GOES transmitter, but Andy Trent (FS) would be the contact to double check this.
- Finalized data is likely to be current through the last quarter.
- Meteorological data – only pulling met data from air quality monitoring stations and MADIS network, not sure if RAWs stations are covered in this.

Experimental – AirNow Satellite Data Processor at [www.asdpairnowtech.org](http://www.asdpairnowtech.org) (below)

For further information can also email: [AirNowInfo@sonomatech.com](mailto:AirNowInfo@sonomatech.com)

### Joint Fire Science Program Ideas for future projects

- Existing research: Model validation and how quickly the models change, including, climate change and smoke, smoke and populations, and Emissions Inventory.
- Currently funding secondary emissions formation and effects of smoke on human health in urban centers.
- Estimated tradeoffs between wildfire vs. prescribed fire, especially for carbon.
  - Scale and timing of emission release.
  - Different than models and prior data/info such as PNW for example. Ties into climate change estimates and projects.



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- Susan: WA wildfire/2012—burn encountered previously burned area and fire behavior dropped significantly.
- Claudia: Region 3 has helpful data, next gen air monitoring equipment (portable monitors).
- Gary: NC info where wildfire burned into 2 previously burned areas (Rx & wildfire). Rx fire area reduced fire behavior and previously burned wildfire area experienced greater fire behavior & severity.
- How do people secure their homes from smoke.
- OSHA standards vs. NAAQS standards. Estimated smoldering potential.
- Science Plan needs more additions?

### NWS IMET

- SD only state w/certified non-NWS IMET for forestry. There is no legal basis for issuing a red-flag warning unless you are FS employee.
- USFS is the only agency with outlined guides for an IMET, but hasn't been used. All GACCS are training to go to the NWS.
- Pete to present on fire response on IMET call—ARA training session pushed to first week in May.

### SmoC ideas:

- Climate change relationship between carbon release during Rx burns vs long term carbon sequestration and the benefit tradeoffs (CDQ for NEPA analysis—the science is vague on this).
  - Rx fire process may have to account for carbon emissions—the science is not yet there to support this.
- Nick sent information on polyethylene emission from burning piles—this is a more specific topic, but may fit under the emission inventory umbrella.
  - Study would have implications for pile moisture as well.
  - Usually a 2-year process to get an idea approved as a topic that they want proposals on, then submitting, reviewing, and possible funding.

### Subcommittee Report-outs

#### Smoke Technical Topics

- Smoke Management Guide work is continuing.
- Susan's discussions with Tesh Rao/EPA:
- 2014 is a national emission inventory year w/1<sup>st</sup> draft of 2014 NEI by June 2016.
- Recommend EPA contact state foresters & state regulatory committee to collect fire info. Also, NWCG exec board, fed agencies, and Dan Smith (state level). Pete can discuss at all chairs.
- Sim and PNW put boiler plate info for outreach opportunities with other groups. Susan to draft a 1 pager including for this and to include NEI discrepancies in MN and drought info.
- Meet with WRCC February 20<sup>th</sup>.

#### Smoke Training

- Transportation Safety workbook will be wrapped up at the end of this week. Exposure working group call end of Feb.
- Mark to contact WFSTAR about communication logistics.
- SmoC Training subcommittee call will be the first week of March.

#### Smoke Managers

- Mike to finalize draft minutes from last meeting.
- Next meeting is tentatively set for either 2/18 or the week of March 3.



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- Mark Melvin, head of RX fire council, will be a guest on the call. They will send an invite out to the broader SmoC.
- Claudia to advise SmoC regarding Southwest Smoke Conference dates—Sometime in November.

**Round Robin Topics**

- Comments on Tuesday's ARB presentation on "Persistent Immune Effects of Wildfire PM Exposure During Childhood Development":
  - Outdoor Primate Center smoke exposure during wildfire compared to unexposed animals – tested young primate immune and lung functioning. Primates born during the 2008 wildfires had less elastic lung function, and the immune systems were less capable. Females were more susceptible to early damage from smoke than the males.
- Comments on Tuesday's ARB presentation on "Persistent Immune Effects of Wildfire PM Exposure During Childhood Development":
  - Outdoor Primate Center wildfire smoke exposure: Compared exposed to unexposed animals.
  - Tested young primate immune and lung function.
  - Primates born during the 2008 wildfires had less elastic lung function, and the immune systems were less capable.
  - Females were more susceptible to early damage from smoke than the males.
- NWS expanding IMET opportunities?
  - Forecasters in predictive services have been trying to get into the IMET program, usually positions go to NWS.
  - IMET requires certain software and hardware that need to be transported to the fire – many aren't willing to invest in that capacity. Also a lot of coursework needed, either through MetOne or COMET (didn't discuss which).
  - Similar challenge in the ARA community – ARAs have access to different software and hardware resources. Can NWS provide software and hardware needed for ARAs in the future?
- Claudia to follow up on RX 410 in southwest and how they are going to do it – online, in person, remotely, etc.
- Reminder next Tuesday Shawn Urbanski will be giving a webinar.
- JFSP – interested in ideas for future JFSP projects & if smoke science plan needs more additions.
- S-590 (Fire Behavior Interpretation) Jan 22, 2014 webinar w/Gary & Merriam will be presenting.
- Cache ESAMPLERS Status- Have not found a home yet
- WRCC Briefing on Mixing Heights – Tentative SmoC briefing on February 20<sup>th</sup>.
- Gary at CDC meeting – NASA met is doing soil moisture information for weather models that drive fire weather forecasts (possible tie in to ESP). EPS will be a topic of discussion for the NFDRS and the Southern research station, maybe split the cost among agencies.
  - [Helix Atlanta Project](http://www.cdc.gov/nceh/tracking/helix.htm) making correlations to PM 2.5 with optical density for asthma : <http://www.cdc.gov/nceh/tracking/helix.htm>
  - ROSES-request for NASA projects for SNAP.
- Preliminary stages of NEPA review of GHG emissions from fire. Mike/Pete trying to find out information.
- Discussion regarding the changing roles in NWCG for Wildland Fire Information Transfer (WFIT) and the role of WFIT for fire products, data, and information. Will these products reside in a new location? Should be a topic to discuss at all chairs meeting.
- The S590 smoke webinar for FBAN and LTANs went very well. Will put an example of this in the national course.



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- Should there be a SmoC presence at the IAWF at the large fire conf. in Missoula?
  - Opportunity to have outreach information on our smoke advisors.
  - Pete will be there, Mark F may be going.
  - Josh is planning on going with a FRAMES smoke/emissions resource poster.
- EPA region 10 smoke management meeting will be held in Portland OR 26-28 of March.
  - There will be VTC capability with FS and other agencies.
- ARA workshop might be held the week of May 5—details are still being worked out.
- Southwest Smoke Workshop will probably be the first week of November 6-8 Thurs through Sat. having a weekend day included so the public can be able to attend.